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THE GREAT MENACE OF CIVILIZATION

CANCER

CAUSE
PREVENTION
CURE

BY
EDWARD PERCY ROBINSON, M.D.

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EDWARD PERCY ROBINSON, M.D.

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THE GREAT MENACE OF CIVILIZATION

Society is organized primarily for protection. Given protection from its enemies, the body politic will thrive and develop and fulfill its destiny according to the vital laws which govern it. In a parallel manner this is true of every living organism. Give it protection from its enemies and, other things being equal, it will adjust itself to the environment and thus complete its cycle of life. Volumes may be easily written on the subject; indeed volumes have been written on it and all around it.

But what concerns us in this little treatise, is the special organism which we call human. And among all its enemies, we shall deal with but one. This is an insidious foe which, since time immemorial, has worked under the cover of ignorance. For ages it has been a public menace. Terror is associated with its very name. Nothing perhaps will blanch the cheeks more quickly than to be told: *You have a cancer.* It is like a sentence of death to which the execution is prescribed, replete with grewsome

detail. A cloud of horrors at once rises up before the mind. The soul sickens. The world has changed.

Is it a small thing to rid the mind of this nightmare? Would it be a just thing to raise up hope out of despair if hope were only to be dashed to the ground? The answers come spontaneously to the lips of any ethical being. Surely, no one of common sense would attempt to raise such hope where no grounds for it exist. It would be morally criminal to do so—reprehensible and extremely cruel.

Let us see what grounds we have on which to rear the hope of prevention and cure of what is popularly known as Cancer.

What is this disease which follows civilization so relentlessly? Its name gives no clue to its nature, since *cancer* comes from the Latin, meaning crab, just as *carcinoma* is derived from the Greek word karkinos, which means the same thing. The ancient writers, who named this malady, drew upon their imagination—a common practice in the early days—and because they thought it resembled a crab, they called it cancer or carcinoma. The *spread* of the disease suggested claws which were gnawing away the flesh of the sufferer. Its animal prototype, however, is nearer the octopus than the crab. In fact, the name is unfortunate, for cancer is not

an animal, neither is it caused by germs or parasites. It is purely a personal affliction, to which anyone in middle life, or beyond, is liable. It is neither contagious nor infectious. That is to say, it cannot be communicated from one person to another even by inoculation; but as the name originated thousands of years before modern scientists discovered the pathological nature of the cells found in the tissues of the tumor, it has persisted until we find it not only in the nomenclature of science, but in the vernacular as well.

In order to get a correct conception of cancer, it is necessary to say a word about inflammation. Almost everybody is familiar with the physical manifestation known as inflammation, in some form, since it is so readily recognized by its characteristic features, namely: heat, swelling, redness, and pain. However, these symptoms are not always apparent to the casual observer. In cancer they are deep-seated and, in many instances, all that can be observed is a growth or a tumor in the part affected. An excess of blood to any part of the body will increase, more or less, the warmth of the part. The swelling is owing partly to the presence of the increased amount of blood, and partly to an enlargement of each individual cell in the inflamed region. The influx of blood causes the

redness, while the pain is caused by pressure, or by an irritation of the nerve, in the affected area.

Inflammation is a perfectly natural process; it is always the first step in the healing of all wounds. This healing takes place through what is called the proliferation of the cells. Only when inflammation is produced by bacterial infection, or by chemical or toxic substances, does it become a pathological condition or a "disease." When the causes are removed, the inflammation subsides and the part soon becomes normal.

A cancer always starts from some point of inflammation. It makes no matter where this may be, so long as the area is inflamed. And during the entire course of its existence the area affected with cancer is never free from inflammation. This is important to remember.

All cancers pass through certain stages. At first there is slight redness. This is called hyperemia. From this it passes into the inflammatory stage, which is nothing more than an aggravated form of the original hyperemia. As the inflammation continues, a tumor is formed, which is owing to the increased proliferation of the cells not only but to their greater size. The tumor at first may be very small; but in the majority of cases it rapidly becomes

larger and often attains considerable size. Again, the tumor may stop growing and never reach the cancerous state, or, having become cancerous, its malignancy may be arrested. If, however, the conditions are favorable to the cancerous formation, the tumor-cells begin to divide in an irregular manner. The nature or method of division is such that a new cell cannot be perfectly formed, and in this stage the cell liquefies.

Professor W. H. Pike says: "A single organism (meaning a cell) can grow and develop only up to a certain point, limited by its degree of specialization. That further progress may be made, the individual life must cease and give place to a successor."

It was only through the discovery of the microscope that the study of cell-life became possible, and, indeed, it was by mere chance that the cell was revealed. A monk, as the story goes, was looking at a piece of vegetable tissue through a microscope. He thought he saw little spaces or cavities lying close to one another. These spaces he named cells. Years later, a physician made a similar discovery while examining some animal tissue, and he, also, called these spaces cells. This name has clung to them although they are not cells, really, but, on the contrary, solid particles of matter.

As the microscopic study of the cell is most important in the diagnosis of cancer, it will be clear to the reader why, later in this book, the nature of the cell is so carefully treated.

During the past thirty years, the subject of cancer has occupied the attention of investigators to a greater degree, perhaps, than any other disease, and, of course, the cell has been the main object in this field of study.

The fact has been established that all tumors and cancers are composed of the same cells as those of the tissues in which these growths are found. For example, if the cancer develops in the liver, the cancer-cells will be liver-cells; if the cancer attacks the bone, the cancer-cells will be bone-cells; and so on, through all the varieties of cells which make up the bodily tissues. The only differences which pathologists have found between cancer-cells and normal tissue-cells, are the manner of division, their rapidity of growth, and their variations of size and shape. Thus some may be large; these are called giant cells; others are round; still others are spindle-shaped; and so they are named according to the forms they assume.

From this it is clear that when cell-division is imperfectly performed, a perfect cell cannot be developed, since cell-progeny is produced by a division of the cell in half. Thus when death

ends the family existence of any particular cells, their normal propagation naturally ceases.

To make this clearer, no one would think of planting half an apple-seed with the expectation of growing a perfect apple-tree. The same principle governs the growth of cells. As death carries away countless millions of these tiny cancer-cells, a cavity is formed in the once healthy tissue, by the process known as ulceration.

The so-called "roots" of a cancer are merely the lymphatic vessels and the veins into which cancerous inflammation has spread. These become hard and nodulated. In a like manner the glands in the neighborhood of the cancer swell and harden. It is from these centers that a second cancer develops after a removal of the first. To this secondary process the name metastatic cancer is given (meaning the transfer of disease from one organ or part to another not directly connected with it); but at no time in the existence of the disease is inflammation ever absent; and the only change in the original healthy tissue-cells is in their characteristic forms, the manner of their irregular division, and subsequent liquefaction and death. The conclusion from this is startling, and it might well cause one to exclaim: "A cancer, then, is nothing more than a state of inflammation which

has become malignant." So it seems to the writer, since there is nothing else that it can be. It might be well, therefore, to drop the misnomer *cancer,* and call the disease by its right name: *Malignant Inflammation.*

It follows that, if cancer is an inflammation, the proper method of preventing it is to refrain from the things which cause the inflammation. Chief among these, as we shall see, is the excess soda present in the blood and other tissues of the body. This is the agent which starts the focus of inflammation; but many readers will say that they know of cancers which started from an injury, such as follows a blow or a bruise of some sort; and, in a sense, this is true, for the bruise starts the initial stage of hyperemia from which all cancers and tumors arise. If, however, bruises in themselves caused cancer, the animal kingdom long since would have passed away, because every living thing has, at some time in its life, received some sort of traumatic injury.

Cancer is not a disease that one inherits; but it is a disease which can be acquired. Parents cannot transmit it to their offspring. It may be found in certain families, but in such families it will be observed that a tendency to inflammation exists. This tendency is fostered by an excessive use of some one or many of the

salts of soda, of which mention will be made hereafter. For this reason, persons with a family history of cancer should be extremely careful not to use these chemicals to excess.

This leads us to a consideration of the cause of cancer: In the first place, we shall have to know what a normal organism is in order to understand the processes of disease. We must know what health is before we can know what disease is, since disease is only a divergence—an acceleration or a retardation—of the processes which we call normal. To arrive at this understanding, we need use only simple terms. Learned nomenclature is a convenience to minds trained in science; but it carries little light to those who are not specialists. For this reason, only the simplest terms will be employed.

In the words of William Walker Atkinson, *Mind and Body:* "Each living thing has been evolved from a minute particle of matter in which the most critical tests of science are unable to discover the slightest resemblance, outline, or suggestion of the adult form which is to arise therefrom. This living particle from which the complex organism is to proceed, is called a germ. It is simple, in its primordial state, a cell of living matter, endowed potentially with a principle of growth, expansion, and final maturity of organic structure; but no trace of

such organic structure is discoverable in the germ itself. Indeed, it is not certainly known that a germ is actually alive. Perhaps it were better to define it in the first intent as potentially alive. In any event, neither the microscope nor chemical analysis is able to indicate the existence in a germ proper of any fact or quality by which it may be discriminated from other cells which have no power of growth or development.

"The better view is that every germ capable of becoming an organic body is itself a detached portion of the substance of some living organism already existing. For a long time Harvey's biological aphorism, 'Omne vivum ex ovo,' or 'Every living thing from an egg' was accepted as the correct expression for the beginning of the individual life, and the maxim has been but slightly modified by the more recent biology into the form of 'Every living thing from something alive'—the distinction being that a cell may have all the qualities of a germ except the touch of life and yet remain incapable as any other not-living matter of becoming an organic body.

"Scientific tests have been carefully applied to germs of many kinds, and their quality clearly determined. The living cell is found to be filled with the chemical compound called protein, consisting under analysis of oxygen,

hydrogen, carbon and nitrogen, with traces of sulphur and phosphorus swimming in much water. It should be observed that protein is not a natural product; that is, it is always, so far as known, a constituent of living organisms or a product thereof—a conclusion which strengthens the belief that without life, life cannot begin.

"Such, then, is the germ from which every organic body takes its rise. From this the living individual begins to be. Henceforth the history of the individual life is a history of process, changes, adaptions, and, in a word, evolution. The first of these changes and transformations is simple growth. The germ, or living cell, begins to increase in size. This is the first manifestation, indeed, that the particle of matter in question is a true germ. It expands by a force seemingly within itself; but at first without other modification in character. It remains under the first expansion simple and homogeneous.

"The second stage of the evolution is marked by the appearance of a stricture corresponding to the equator of the cell by which a division begins to be effected, and two cells produced instead of one. Each of the two parts assumes, in turn, the form and character of the original; but the division is not complete, the substance of

the two cells continuing to flow in common under the line of the stricture. Around each of the two lobes, lines of division appear, and four parts are produced instead of two, and these four by division, become eight, each of which retains the exact characteristics of the original germ. Thus is produced what is known as a cell aggregate, which is the first stage in the advance from the germ towards a complete organic being.

"The question at once arises by what means this first enlargement of germ life is effected. Whence come the materials which the cell uses in its own enlargement? Certainly not out of nothing. The cell has the power of appropriation. It has this in virtue of the life-principle within. It draws to itself and absorbs the aliment whereof the increase in size and other phenomena of division and multiplication are produced. The materials so gathered are not mechanically disturbed as if they were packed between the parts of the living cells, but are absorbed and assimilated with the substance thereof, or, in a word, digested.

"The organisms of the larger animals and of man are composed of thirty or more species of cells. An aggregation of cells becomes a federation. That is to say, certain cells unite and

form what we term a tissue. The body is made up of different forms of tissues. For example: We have muscular tissue, cellular tissue, bone tissue, etc. . . .

"The body of each of us is simply a great community of cells of various kinds. The cells are born by various forms of reproduction common to all cells, that of sub-division. Each cell grows until a certain size is reached, when it assumes a "dumb-bell" shape, with a tiny waist line, which waist is afterwards dissolved and the two cells move away from each other. In this way, and this way alone, does the body grow, the material required for the enlargement of the cell being supplied from the food and nourishment partaken by the individual. Cells die after having performed their life-work, and their corpses are carried through the veins by the carrier cells, and cast into the crematory of the lungs, where they are consumed. . . .

"The body is constantly undergoing a process of change and regeneration. Old cells are being cast off every second, and new cells are taking their places. Our muscles, tissues, hair, nails, nerves, brain substance, and even our bones are constantly being made over and rebuilt. Our bodies to-day do not contain a single particle of the material which composed them a few years back. A few weeks suffice to re-

place our entire skin, and a few months to replace other parts of the body. If a sufficiently large microscope could be placed over our bodies, we would see each part of it as active as a hive of bees, each cell being in action and motion, and the entire domestic work of the human hive being performed according to law and order. . . .

"We are compelled to acknowledge a power of natural recovery inherent in the body—a similar statement has been made by writers on the principles of medicine in all ages. The body does possess a means and mechanism for modifying or neutralizing influences which it cannot directly overcome. Oliver Wendell Holmes says: 'Whatever other theories we hold we must recognize the "vis medicatrix naturae" in some shape or other.' Bruce says: 'A natural power of the prevention and repair of disorders and disease has a real and as active an existence within us, as have the ordinary functions of the organs themselves.' Hippocrates said: 'Nature is the physician of diseases.' . . .

"In every cell there is to be found intelligence in a degree required for the successful performance of the particular task of that cell. . . .

"In short, the cells of the body are living

organs for the expression and manifestation of the Subconscious Mind."

The following quotation from Dr. Thomas J. Hudson's "Mental Medicine" clearly expresses a truth conceded by modern science. Dr. Hudson says: "It follows a priori, that every cell in the body is endowed with intelligence; and this is precisely what all biological science tells us is true. Beginning with the lowest form of animal life, the humblest cytode, every living cell is endowed with a wonderful intelligence. There is, in fact, no line to be drawn between life and mind."

The cells are endowed with the faculty of discrimination. They must choose between the foods which nourish them and the substances which do not. Thus the cells of our bodies are supported, principally, by the chemical salts taken from the animal and vegetable matter which we use as food. This food, having undergone complicated physical and chemical changes, passes into the blood. The cells are compelled to accept or reject it. In normal conditions they take what they need to maintain themselves in health and they reject the rest. Thus the great art of correct or proper living depends upon the knowledge of how much of the different foods is necessary. Too much

of one kind and too little of another may be equally harmful.

Nature has adjusted plant-life to animal requirements, or, what amounts to the same thing, animal needs to plant-contents and conditions. The more important soil-derived elements of plant food include chlorine, sulphur, phosphorus, silicon, potassium, sodium, calcium, magnesium, iron and nitrogen, either free or as nitrates.

The chemical salts of the plant supply the needs of the animal which feeds on the plant. But to prevent the over-accumulation in the animal cells of any one constituent taken in as food, a variety of vegetable life is accessible (to the animal).

The diet of man, being of both animal and vegetable tissues, retains the proportions of these chemical constituents undisturbed. But there is one salt so artificially increased that its just relation to the others is enormously out of proportion. This is sodium chloride, or what is known as common table salt. The increase of this ingredient in our food is obvious to all who live under present-day civilization; for there is scarcely a meal that has not been well salted in the process of its preparation, and again well salted when served, and possibly once more salted before it is eaten.

Let us consider for a moment how much salt is consumed daily and what becomes of the excess. Common sense will quickly tell us how unwise it must be to continue taking such disproportionate quantities of this material.

All the salt needed by the human system is supplied by the animal and vegetable tissues which we eat. The extra salt added to our food is excessive. The digestive fluid of the stomach, called the gastric juice, contains among other things, hydrochloric acid. This acid is made from the salt taken into the stomach, no matter whether the salt is naturally held by the food or artificially put into it; and it is made from nothing else. Therefore, too much salt will produce too much acid.

Any substance, or any amount of substances, which nature does not need in the economy of the system is passed from the body. Substances not required are regarded as foreign, and quantities over and above the amount necessary to health are actually superfluous. For only what is naturally needed is retained and used by the cells.

The kidneys are the organs which remove the salts from the body. They must do extra work in proportion to the excess which must be removed. These organs, termed the filters of the body, are extremely sensitive to the presence of

irritating substances; their mechanism is intricate and consists of cells so highly specialized in the task of separating chemical substances from the blood, that some biologists consider the kidneys as organs possessing a high degree of intelligent discrimination. Normally, they will remove a reasonable amount of salt from the blood and fluids of the body, and even continue to remove an excess for a time, but when their capacity is overtaxed they cease to function and the poisonous excretions are thereby thrown back into the cells of the body. It is plain to be seen how much depends on the treatment they receive. The civilized adult passes about fifty ounces (a little over four pints) of water during the twenty-four hours. This is considered a normal amount. An analysis of this water shows, besides other substances, the presence of the half of one per cent of chlorides (written 0.50). The chlorides come from the salts which have been eaten. A rough calculation will show that something like two drams, or 120 grains, or about two teaspoonfuls of salt are removed from the body daily. It is hardly reasonable to assume that the kidneys can continue this extraordinary task of analytical chemistry indefinitely and remain healthy. However, I said that nature only removed the excess. Then, theoretically, the half of one

per cent must be an excess. If this is true, common sense would ask: why put this excess of salt into the system and thus force the kidneys to do unnecessary work to get rid of it? The relish of salt—its agreeable taste—is a poor reason for a rational person to give. It goes without saying that it would be much wiser to reduce the excess passed in the urine to about 0.05, which is quite liberal enough.

There is never any danger of eating too little salt since the system is always passing an excess. And here it may be well to quote from A. R. Cushing's work on *The Secretion of Urine*. "The percentage of sodium in the blood plasma remains practically unchanged whatever the amount in the urine may be; any marked deviation is incompatible with life." That is to say, the blood and the other fluids of the body will continue to retain their required amount of salt despite the fact that little or none is passed in the urine. Indeed, the amount of salt which must be taken to maintain its normal quantity in the bodily fluids is very small. Many persons eat none whatever except that which nature has put into their food. This is particularly true of savage peoples. The North American Indians, for example, use very little salt, and this only on ceremonial occasions when a bowl is passed around from which each takes a pinch.

Right here it can be stated, that cancer is unknown amongst the Indians living in their natural state.

An excellent authority on the Far East says: "I was unable to see or even hear of any cancer, although I met a large number of medical men and made many inquiries regarding the disease. I visited hospitals with a total of many thousands of patients in Japan, China, Korea, the Philippines, India, Siam and Egypt. Everywhere I met with the same statement, viz., that cancer was rarely seen among those vegetarian peoples."

It is important to note that this writer particularly mentions Japan as being free from cancer, for about twenty-five years ago there was an enormous mortality in that country from this disease. It appears that in some sections of Japan, at that time, the inhabitants lived largely on salted fish, which was about the only animal food to be had. As the fish were caught at a certain season only, it was necessary to preserve them in salt in order to keep a supply on hand. And here again we have a very significant fact: It was not until the consumption of salted fish had been materially reduced, with the consequent lessening of salt used in food, that cancer disappeared from Japan. The rea-

son being, it is fair to infer, that the Japanese are not salt gourmands.

We of the Occident consider ourselves the most highly civilized beings on earth; and yet we die at the rate of 100,000 yearly from cancer and "malignant tumors" while less civilized peoples, who live more primitive lives, are free from these dread diseases.

It would not be quite fair to put all the blame on sodium chloride (table salt) as the only agent through which the element soda enters the system. There are many other salts of soda which have become common household remedies, and which are taken with as much avidity as the common table salt. We are familiar, for example, with bicarbonate of soda. Almost everyone has taken a dose of this salt to relieve an "acid stomach"; and many of us have learned by experience that the relief is only temporary, for it is usually followed by a greater acidity. Furthermore, the cells of the body must either remove the excess soda, or else suffer it to crowd out the potash-element which normally belongs to their chemical composition.

In addition there is the benzoate of soda, the salicylate of soda, and borate of soda, used to preserve certain perishable foods, together with salts formed by the combination of soda with fatty acids. These salts, it is true, are taken

in very small amounts, nevertheless they are sufficient to injure the health and therefore the efficiency of the cells. Moreover, there is the rather lavish use of baking soda in the household. All these salts are but different forms of the same element. That is to say, soda is present in them all, or they would not be called salts of soda. It is almost superfluous to mention the salts used in canned goods.

After this insidious fashion soda enters the human body in such large quantities and so continuously, that the cells become charged with it to their great harm. And why is this? Because the excess soda element of the cell-ingredients displaces the potash which is essential to their healthy functions. Thus the cells are forced to fight for existence in a hostile environment, and being denied the material destined for them, they fall prey to disease and disintegration, one phase of which is known as cancer.

The real or inciting cause of cancer is the excessive sodium element in the cells and fluids of the body. This poison, for it is nothing else (when in excess), so weakens the cells' power of resistance that they quickly become inflamed and frequently pass into a malignant condition.

Perhaps the reason why cancer develops late in life, is owing to the failure of the cells to distinguish between the soda and potash ele-

ments; and therefore as the soda element is not at first recognized by the cells as a poison, it slowly insinuates itself into their bodies and, by the most minute gradations, finally displaces the potash salt. This is a slow process, requiring years until the change is complete. And thus it is that cancer is a disease of middle life and beyond. This is a logical assumption, since the disease never attacks infants and young children.

The writer set out with the purpose to offer some suggestions for the prevention and the possible elimination of this disease; to see, if he could, whether hope may not take the place of despair. Naturally, the physician is always the proper person to consult regarding all questions pertaining to health or disease, and particularly so when a condition such as cancer is suspected. Usually more harm is done in self-treatment than by leaving things alone. But the following suggestions may prove vastly beneficial to the great masses of people subject to this disease, largely through ignorance of its causes, its processes, and the rational means of its prevention and elimination.

The question arises: What is to be done? The answer is simple enough. Eat less soda and more of the vegetables which contain the potash salts. Thus the mortality from cancer

may be greatly reduced by the avoidance of such diets as contain an excess of salt. Care should be taken to guard against too much salt in the food. None should be added after the food is served. The amount of salt commonly used for seasoning during the cooking is ample, and more than enough to supply the needs of the system. The salting of food before tasting it is absurd; and besides, it is a vulgar habit never indulged by refined epicurians, who rather enjoy the natural flavor of the morsel before it has been killed with brine.

Bicarbonate of soda should not be taken every time an uncomfortable feeling occurs in the stomach. The reasons for this have been given.

Anyone sufficiently interested in wholesome diet may write to the Department of Agriculture, Washington, D. C., for information on the subject. Leaflets and pamphlets will be sent containing oceans of useful knowledge on the composition of foods, their food values—and things of a kindred nature. This information cannot be compressed within these limits. The subject in hand is rather the discussion of cancer, its cause, its prevention, and cure by medicinal means.

While on the subject of food, however, a few suggestions may be acceptable. The skin of the potato is rich in salts useful to the cells of the

body. Therefore the skin should be eaten with the potato. There are many foods eaten by our friends, "the lower animals," which would be good for human beings. Take alfalfa and clover, for instance: There is no reason why these should not be edible when properly prepared. They serve the needs of the animal economy admirably. And we cannot forget, if we would, that the design, or scheme, of animal life is virtually the same for all. The modifications are slight and of little relative importance. The same system of immutable laws governs all that live.

It is not difficult to understand why such grasses as clover and alfalfa should serve us well as food. They are rich in potash salts and when prepared as biscuits, etc., from the flour, should be wholesome as human food, and such articles added to our diet would most likely aid us in avoiding cancerous affections. For we must remember that the animals which feed, more or less habitually, on these grasses are not susceptible to cancer.

For the same reason an infusion of clover might well be substituted for tea and coffee. Some years ago one of our most distinguished American writers contributed an article, which was widely read, on the value of "clover-tea" in the treatment of cancer. Instances were cited

of cancer-cures effected merely by the drinking of this "tea." At the time the article appeared, many learned medical men expressed incredulity and amusement. Clover, which belongs to the pea family, is rich in the nitrate of potash, and it should therefore be an ideal agent for introducing potash into the cells of the body. The scientific farmer knows that clover has the means of taking nitrogen from the air and storing it in little nodules on the roots. The process is aided by a family of bacteria. For this reason the farmer plows the clover under when he wishes to fertilize the soil.

In preparing foods for the table which have been preserved in salt, a thorough preliminary soaking should be given them before they are cooked. By following a few simple precautions, some of which have been suggested, much can, no doubt, be done toward the prevention of cancer.

Finally, the urine should be examined occasionally, to see to it that its percentage of chlorides is maintained suitable to one's environment. The normal equation should be determined and adhered to. As has been said, the 0.50 per cent of chlorides in the urine is much too high.

The horse, weighing about half a ton, passes only 0.07 per cent of chlorides; the pig's per-

centage is 0.13. These percentages vary, of course, but authorities average them so that they may be appreciated at a glance. Incidentally, it may be mentioned that the relatively small amount of chlorides passed by the horse and the high per cent passed by the pig are owing to the manner in which these domestic animals obtain their salt. The horse licks with temperance and moderation a lump of rock salt placed in the manger, while the pig is fed on scraps of food from the table of man which contains more salt than is necessary. It would be better for the pig, no doubt, if he had a less salty diet. He could readily get all the salt he needs from his native food, roots, bulbs, etc. Is it presumptuous to ask, why a man should not be as temperate in his consumption of salt as a pig or horse? Surely it would be a blessing if mankind were as free from cancer as are these animals.

Where cancer already exists, no effective course of treatment can be laid down in a general dissertation. Cases vary. The question arises, however, should a cancer be removed by an operation? The answer to this must be given by the physician or surgeon. Nevertheless, there is no reason why an intelligent world should not know that there are only twenty-five per cent of all cases of cancer which can be

operated on and that about five per cent of this number remain cured for a few years only: the patients die of it eventually. An operation removes the effect but not the cause.

The following statistics, as given in the *Medical Record* of March 2, 1918 (page 362), may aid the sufferer in determining whether the treatment shall be surgical or medicinal. "Since 1914, when there was started the active propaganda for the more radical surgical treatment of cancer, the increase in the death rate has been much greater than before that time. Thus in the United States the mortality figure has steadily risen, so that in 1915 it was 81.1 per 100,000 or a total rise of 28.7 per cent since 1900. In 1916 it was 81.8 per 100,000 or 29.84 per cent increase since 1900.

"During 1917 there was a total of 78,467 deaths from all causes in Greater New York against 77,948 in 1916, an increase of 519 or less than one per cent; whereas the increase in cancer deaths was 224 or almost five per cent."

And the writer continues with the statement, "Surely such figures, which cannot lie and which show an increase of cancer mortality nearly five times that from general causes, cannot be explained away by greater accuracy of diagnosis or more perfect recording of death certificates."

From these figures the reader may draw his own conclusion.

A glance over the *Weekly Bulletin* of March 9, 1918, issued by the Department of Health of a large first-class city of America, will show that those diseases incited by, or are dependent upon, an inflammatory condition of the cell-tissue involved have the highest death rate. The order is as follows: Cancer, Malignant Tumor, 105; Organic Heart Disease, 265; Pneumonia, 232; Broncho Pneumonia, 102; Bright's disease and Nephritis, 121; Tuberculosis, 193.

And although Tuberculosis of the lungs is caused by a recognizable bacillus, this disease, in the opinion of the writer, would be less prevalent if the lung tissue was not subjected to the irritating action of an excess of soda on the delicate air-cells of the lungs. And this assumption is based on the fact that all bacilli, in order to grow, must first find a suitable, fertile field for their propagation, and that an inflammation, or a tendency thereto, is the primary step in the cultivation of all germ diseases.

This being conceded, can we not, by analogy, reasonably include under this category, that most prevalent and disgusting affliction known as Pyorrhea or Rigg's disease? For although a distinct organism (an entameba) is frequently found in the ulcerated gum tissue in cases of

pyorrhea, it has never been found in gums free from inflammation.

On September 1, 1917, *The Medical Record* published an article under the heading, "An Hypothesis Regarding the Physicochemical Nature of Cancer," submitted by the writer, in which his views and reasons for attributing the cause of cancer to excessive use of common table salt were set forth. In another article under the heading, "A Plea for the Use of Potassium Nitrate in the Treatment of Cancer," reasons were given for the belief that an antidote for the poisonous effects of common salt on the human system had been discovered. The following is taken verbatim from this article:

"Regarding Potassium Nitrate from the viewpoint of a therapeutic agent in the treatment of cancer, the writer feels that enough has been offered here to show reasons why this drug should be given a trial. In the past, the internal treatment of cancer, decidedly meagre, and undoubtedly empirical, was not productive of any remedial advantages from which a system of treatment might be formulated, and if perchance there were evidences of improvement or of cure in any given instance, no logical reasons for such phenomena were forthcoming. But in this instance we start with the hypothesis that sodium chloride is the cause of cancer; and we

learn that potassium nitrate is effective in displacing this substance in the manner already described, namely: that the nitrates displace the chlorides; that the potassium salt displaces the sodium salt, and at the same time takes the place of the sodium salt in the cell, of which it is a natural component.

"Be this as it may. When it is realized that the death-rate of cancer has almost reached the appalling number of One Hundred Thousand lives yearly, and that in New York City alone the weekly average of deaths from cancer and malignant tumors is in the neighborhood of ninety, it would seem that any drug (especially one as harmless as potash) which offered the slightest hope in ameliorating this awful scourge is deserving of trial, and potassium nitrate seems to the writer to be the most logical one to try."

Potassium nitrate is otherwise known as saltpetre. It is found in the soil, and naturally it enters into the composition of the plant, by which means it finds its way into the body of man. We can safely take it without fear of forming a habit as no conscious sensations result from taking it.

But nitrate of potash is not a drug which can be used indiscriminately. Its efficacy depends upon the quantity taken, the size of the

dose, the frequency and the manner of giving it. Large doses are extremely irritant to the stomach and intestines, causing gastritis and enteritis. It is also a powerful heart depressant. Imprudently used, this drug is not without danger. Therefore it should be given under the supervision of a physician and the aim of the scientific Doctor should be to follow nature's methods as closely as possible in the administration of this drug, and particularly in the dosage; for as nature administers potash in food, the dose is excessively minute and *often* repeated. But the important corollary from the natural minute dosage, obtained in certain foods, is the dissociation or ionization of the salt in order to obtain its quick appropriation by the cells and the maximum efficiency of the various complex electro-chemical and other interactions produced by it. As the Doctor cannot precisely duplicate nature's methods, he should for that reason take great pains to approximate them by the proper dilution of the drug and through its frequency of administration. By this means it will be shown that nitrate of potash is the agent which will displace the excess soda accumulated in the cells, and aid in restoring their normal chemical equilibrium and their power of resistance against factors

which tend to cause an inflammation, and the possible focus for the beginning of cancer.

Of all the salts of the earth that enter into the composition of the animal and the vegetable cell, potassium nitrate seems to have been selected by nature as one of the great stabilizers of the chemical constitution of the body.

To understand the comparative chemistry of the kindred salts, or those salts which replace one another, books on chemistry should be consulted, but all that need be said here is that no other salt possesses in a like manner the combined action of an acid and an alkali equal to that of the nitrate of potash; nor will similar salts act as thoroughly as this salt. For example, the potassium displaces the excess sodium in the cell and at the same time takes its place in the proper proportion of the cell-ingredients, while the nitrate displaces the chlorides in the cell and equalizes the amount both of nitrates and of chlorides suitable for the proper functioning of the body; and besides, should too much of this salt enter the system at any time, that which the cells do not need is instantly passed away through the excretory channels.

In primeval times man lived on raw herbs and roots and he consumed a fair amount of dirt and earth. It was not necessary for him

to seek medicines to maintain his health. But the development of his inventive ingenuity in feeding himself has outstripped the evolution of his cells, and this has disturbed the balance which normally exists between the chemical constitution of his cells and his bodily fluids, with the inevitable result that degenerative changes have occurred in his internal organs.

It seems to be an established fact that cancer follows civilization. One might be pardoned for asking: Does it pay to be civilized, and might it not be wise for us to copy some of the dietary customs, at least, of the less favored or even savage peoples? For by so doing we might free ourselves of much misery by preventing one of the most loathsome and cruel afflictions known to man.

Evidently the fundamental principle which governs health is related to the correct chemical constitution of the cell, and its immunity from inflammation. If we can assume this to be true, knowing furthermore that an excess of an element, such as soda, in the cells may lead to inflammation and subsequently to a disease, we can affirm that the most of our ills are preventable and that they are caused through wilful disregard of natural laws.

Thus far we have dealt with the theory of cancer. The theory is new. It is original

with the author. Medical science has not discovered any facts which conflict with this theory. On the contrary, there are many known facts which would tend to verify the theory. However, only the lapse of time can do that. If, after the employment of the chemical antidote, the annual death-rate of cancer gradually decreases, then one may be justified in saying that both cause and cure of cancer have been discovered—but not until then.

In concluding the discussion of the subject-matter in this volume the writer posits the belief that the statements made are founded on truth. The deductions, conclusions and the analogies are all within the bounds of reason and logic, and are not drawn from false or shadowy premises. However, if the reasoning is faulty, let him correct it who can.

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